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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/609,116	06/27/2003	Helmut W. Kucera	IR-2649(NBA)DIV	9257

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LORD CORPORATION  
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EXAMINER

TUROC, DAVID P

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 12/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

### Application No.

10/609,116

### Applicant(s)

KUCERA ET AL.

### Examiner

David Turocy

### Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Oath/Declaration***

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

The specification to which the oath or declaration is directed has not been adequately identified. See MPEP § 602. The Oath is directed to US Application 09/488716 filed January 20<sup>th</sup> 2000, instead of US Application 10/609116 filed June 27 2003.

### ***Specification***

2. Claim 1 is objected to because of the following informalities:
  - a. Claim reads "either in said first composition, or a combination thereof, after contact with first composition" it is unclear what combination is being referred to.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-3, 5-11, 12-13, 15-16, 19-21, 23-26, and 27-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 00/43131 by Kucera et al. ("Kucera") in view of US Patent 4766844 by Brewer et al ("Brewer").

Claims 1,5,6, 12, 19, 23, and 27: Kucera teaches of coating a metal substrate by bringing the metal substrate into contact by immersion with an autodepositing composition to form a first film on the substrate surface (Example 3). Kucera discloses drying after contact with first composition (Example 3). Kucera also discloses bring the metal substrate into contact with a second composition and a subsequent drying (Example 3).

However, Kucera fails to teach of grasping the substrate with an articulate electromechanical device and articulating the substrate.

Brewer teaches coating a metal substrate by immersion using an microprocessor controlled robot arm to reduce the time required to complete the process (Column 1, lines 21-25). Brewer discloses the metal substrate is rotated after immersion into the first composition and second composition (Column 2, lines 50-52).

Therefore, it would have been obvious to one skilled in the art at the time of the invention to program the electromechanical device of Brewer to use the process steps as suggested by Kucera to provide a desirable coating on a metal substrate because Brewer teaches an electromechanical device with a programmable controller reduces time required to complete process.

Claim 2,7 and 20: Kucera discloses a dry film thickness of 10-30 microns and also discloses the length of time metal substrate is immersed in the solution determines the thickness of the film (Page 21, lines 11-17). It is well settled that determination of optimum values of cause effective variables such as these process parameters is within the skill of one practicing in the art. *In re Boesch*, 205 USPQ 215 (CCPA 1980).

Claim 3, 13, 21, and 28: Kucera discloses that typically the bath residence time is from 5 to 120 seconds and more preferably 10 to 30 seconds (Page 21, lines 11-17). Kucera also discloses the metal substrate is dipped in the first composition for 15 seconds and the second composition for 10 seconds (Example 3).

Claim 8 and 24: Kucera discloses a first composition of a metal treatment and a second composition of a primer (Example 3).

Claim 9, 10, and 25: Kucera discloses the first composition comprises an acid and a phenolic resin (Example 3). Kucera also discloses the second composition comprises a phenolic resin and a flexibilizer (Example 3).

Claims 11 and 26: Kucera discloses drying the metal substrate after each immersion step (Example 3). It is the examiners position that the drying at elevated temperatures as disclosed by Kucera inherently utilizes heated zones to dry the substrate.

Claims 16, 30, and 31: Kucera in view of Brewer teach all the limitations of these claims, except they fail to disclose a substrate displacing at least 0.25% of the volume of the immersion bath and a bath turnover of 1 hour to 5 days.

However, it is the examiners position that the prior art and the present claims, reflected by claim 11 and 25, teach all the same process steps and thus the results obtained by applicants process must necessarily be the same as those obtained by the prior art. Both processes, prior art and applicants, teach of immersing a metal object into a metal treatment bath to form a uniform coating of micron size, therefore the immersion bath of the prior art must necessarily provide the same substrate displacement and bath turnover.

6. Claims 4, 14, 15, 22, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 00/43131 by Kucera et al. ("Kucera") in view of US Patent 4766844 by Brewer et al ("Brewer") and further in view of US Patent 4657788 by Benton et al ("Benton").

Claims 4 and 22: Kucera in view of Brewer is applied here as applied above in the 35 USC 103(a) rejection.

However, Kucera in view of Brewer fails to teach of articulating while in contact with immersion bath.

Benton, teaching autodepositing coating on metal substrates, discloses agitating the coating composition while immersing the metal substrate helps in forming a uniform coating, which can be accomplished by moving the substrate in the coating bath (Column 5, lines 37-43).

Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify Kucera in view of Brewer to move the substrate in the coating bath suggested by Benton to provide a desirable uniform coating on a metal substrate because Kucera in view of Brewer teaches immersing a metal substrate in a autodeposition bath and Benton teaches a uniform coating is formed by moving the substrate in the bath.

Claims 14 and 29: Kucera in view of Brewer is applied here as applied above in the 35 USC 103(a) rejection.

However, Kucera in view of Brewer fails to teach of articulating 20-90% of the immersion time.

However, it is the examiners position that amount of articulation is a cause effective variable and determining the length of time to articulate during the immersion process is within the scope of one of ordinary skill in the art at the time of the invention. It would have been obvious to one having ordinary skill in the art to have determined the optimum value of a cause effective variable such as preheat time through routine experimentation in the absence of a showing of criticality. *In re Woodruff*, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

Claim 15: Kucera in view of Brewer teach all the limitations of these claims as discussed above, but fails to teach of displacing at least 0.25% of the volume of the immersion bath and a bath turnover of 1 hour to 5 days.

However, it is the examiners position that the prior art and the present claims, reflected by claim 4, teach all the same process steps and thus the results obtained by applicants process must necessarily be the same as those obtained by the prior art. Both processes, prior art and applicants, teach of immersing a metal object into a metal treatment bath to form a uniform coating of micron size, therefore the immersion bath of the prior art must necessarily provide the same substrate displacement and bath turnover.



7. Claims 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 00/43131 by Kucera et al. ("Kucera") in view of US Patent 4766844 by Brewer et al ("Brewer") and further in view of US Patent 4103049 by Nishida et al ("Nishida").

Kucera in view of Brewer is applied here as applied above in the 35 USC 103(a) rejection. However, Kucera in view of Brewer fails to teach cleaning the substrate using a cleaning device.

Nishida, teaching of a process for applying a coating to a metal substrate, discloses that the metal substrates were cleaned in a conventional alkali metal cleaning solution prior to immersing in the coating composition (Column 8, lines 60-65).

Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify Kucera in view of Brewer to clean the metal substrate prior to immersing as suggested by Nishida to provide a desirable coating on a metal substrate because Kucera in view of Brewer teaches immersing a metal substrate into a coating bath and Nishida teaches it is known in the art to clean the metal substrate using a chemical cleaner prior to immersing in the coating bath.

8. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 00/43131 by Kucera et al. ("Kucera") in view of US Patent 4766844 by Brewer et al ("Brewer") and US Patent 4657788 by Benton et al ("Benton") and further in view of US Patent 4103049 by Nishida et al ("Nishida").

Kucera in view of Brewer and Benton teach all the limitations of these claims as discussed above, but fails to teach of cleaning the substrate using a cleaning device.

It would have been obvious to clean the metal substrate prior to immersing in the coating bath as suggested by Nishida for the same reasoning as discussed in Section 7 above.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent 5916400 teaches of applying a coating by immersion using a robot. US Patent 5500460 by Ahmed et al teaches of an autodeposition process.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Turocy whose telephone number is (571) 272-2940. The examiner can normally be reached on Monday-Friday 8:30-6:00, No 2nd Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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PRIMARY EXAMINER